

WE CLAIM

1. An information retrieval system in which a set of distinct information items map to respective nodes in an array of nodes by mutual similarity of the information items, so
5 that similar information items map to nodes at similar positions in the array of nodes; the system comprising:
 - a user control for defining a search criterion for selecting information items;
 - a detector for detecting those positions within the array of nodes corresponding to the selected information items;
 - 10 a graphical user interface for displaying display points representing those positions within the array of nodes corresponding to the selected information items; and
 - a processor, responsive to the selected information items defined by the search criterion, for providing one or more representations representative of the information content of the selected information items.
- 15 2. A system according to claim 1, wherein the graphical user interface is operable to display a two-dimensional display array of the said display points.
3. A system according to claim 2, in which a dither component is applied to the
20 mapping between information items and nodes in the array so that substantially identical information items tend to map to closely spaced but different positions in the displayed array.
4. A system according to claim 2, in which the information items are mapped to
25 nodes in the array on the basis of a feature vector derived from each information item.
5. A system according to claim 4, in which the feature vector for an information item represents a set of frequencies of occurrence, within that information item, of each of a group of information features.

6. A system according to claim 5, in which the information items comprise textual information, the feature vector for an information item represents a set of frequencies of occurrence, within that information item, of each of a group of words.

5 7. A system according to claim 1, in which the information items comprise textual information, the nodes being mapped by mutual similarity of at least a part of the textual information.

8. A system according to claim 6, in which the information items are pre-processed
10 for mapping by excluding words occurring with more than a threshold frequency amongst the set of information items.

9. A system according to claim 6, in which the information items are pre-processed
15 for mapping by excluding words occurring with less than a threshold frequency amongst the set of information items.

10. A system according to claim 1, wherein the said user control comprises:
search means for carrying out a search of the information items;
the search means and the graphical user interface being arranged to co-operate so
20 that only those display points corresponding to information items selected by the search are displayed on the user display.

11. A system according to claim 1, wherein the said processor is operable to detect
clusters of similar information items and to provide representations representative of the
25 information content of the respective clusters.

12. A system according to claim 1, wherein the processor is operable to provide the or
each said representation on the user display as a label of the display points corresponding
to the information items represented thereby.

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13. A system according to claim 12, wherein the label is a word or set of words.

14. A system according to claim 11, wherein the processor determines, in respect of a set of information items with which a label is to be associated, the most frequently used word or set of words in the information items corresponding to the selected information items and applies that word or that set of words as the label.

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15. An information retrieval system according to claim 1, in which the information items are at least associated with image items, and

wherein the processor is responsive to the selected information items, for providing one or more image items representative of the information content of the selected information items defined by the search criterion.

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16. A system according to claim 15, wherein the said processor is operable to select, from the set of image items, an image item which is representative of the set of image items as a whole according to a predetermined selection criterion.

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17. A system according to claim 15, wherein the processor is operable to select the image item a property of which is nearest to the average of the same property of the said set of image items.

18. A system according to claim 15, wherein the said one or more representative image items are applied as labels to the display points corresponding to the information items represented thereby.

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19. A portable data processing device comprising a system according to claim 1.

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20. Video acquisition and/or processing apparatus comprising a system according to claim 1.

21. An information retrieval method in which a set of distinct information items map to respective nodes in an array of nodes by mutual similarity of the information items, so that similar information items map to nodes at similar positions in the array of nodes; the method comprising the steps of:

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defining a search criterion for selecting information items;
detecting those positions within the array of nodes corresponding to the selected
information items;

5 displaying at least display points which are at positions representing those
positions within the array of nodes corresponding to the selected information items; and

in response to the selected information items defined by the search criterion,
providing one or more representations representative of the information content of the
selected information items.

10 22. A method according to claim 21, wherein the displaying step displays a two-
dimensional display array of the said display points.

23. A method according to claim 21, comprising:
carrying out a search of the information items;

15 displaying on the display that only those display points corresponding to
information items selected by the search are displayed on the user display.

24. A method according to claim 21, comprising detecting clusters of similar
information items and providing representations representative of the information content
20 of the respective clusters.

25. A method according to claim 21, comprising providing the or each said
representation on the user display as a label of the display points corresponding to the
information items represented thereby.

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26. A method according to claim 25, wherein the label is a word or set of words.

27. A method according to claim 21, in which the information items are at least
associated with image items, and

30 comprising providing one or more image items representative of the information
content of the selected information items defined by the search criterion.

28. A method according to claim 27, comprising selecting, from the set of image items, an image item which is representative of the set of image items as a whole according to a predetermined selection criterion.

5 29. A method according to claim 28, comprising selecting the image item a property of which is nearest to the average of the same property of the said set of image items.

30. Computer software having program code for carrying out a method according to claim 21.

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31. A providing medium for providing program code according to claim 30.

32. A medium according to claim 31, the medium being a storage medium.

15 33. A medium according to claim 31, the medium being a transmission medium.

34. A user interface of an information retrieval system in which a set of distinct information items map to respective nodes in an array of nodes by mutual similarity of the information items, so that similar information items map to nodes at similar positions

20 in the array of nodes; the interface comprising:

a user control for defining a search criterion for selecting information items; and

a graphical user interface arranged to displaying display points representing those positions within the array of nodes corresponding to the selected information items and to display one or more representations representative of the information content of the

25 information items. selected by the search criterion.

35. A user interface according to claim 34, wherein the said user control comprises:

search means for carrying out a search of the information items;

the search means and the graphical user interface being arranged to co-operate so

30 that only those display points corresponding to information items selected by the search are displayed on the user display.

36. An interface according to claim 34, wherein the graphical user interface is arranged to display representations representative of the information content of respective clusters of similar information items.

- 5 37. An interface according to claim 34, wherein graphical user interface is operable to provide the or each said representation as a label of the display points corresponding to the information items represented thereby.

38. An interface according to claim 37, wherein the label is a word or set of words.

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39. An interface according to claim 34, wherein the said representations are image items which are applied as labels to the display points corresponding to the information items represented thereby.